STUDENT REPORT

DETAILS

Name

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Roll Number

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EXPERIMENT

Title

TARGET SUM

Description

You are given a list of integers, and your task is to write a function that finds the two numbers in the list that add up to a specific target sum. You need to return the indices of these two numbers.

Write a function that takes a list of Integers and a target sum as input and returns a list of two indices (0-based) of the numbers that add up to the target sum. Assume that there is exactly one solution, and you cannot use the same element twice

Sample Input:

2 7 11 15

9

Sample Output:

[0, 1]

Source Code:

```
def two_sum(nums, target):
    # Create a dictionary to store the indices of the
numbers
    num_to_index = {}

    # Iterate through the list of numbers
    for index, num in enumerate(nums):
        # Calculate the required complement
        complement = target - num

        # Check if the complement exists in the dictio
nary
        if complement in num_to_index:
            return [num_to_index[complement], index]

        # Store the index of the current number in the
dictionary
        num_to_index[num] = index

# Sample usage
nums = [2, 7, 11, 15]
target = 9
output = two_sum(nums, target)
print(output)  # Output: [0, 1]
```

RESULT

2 / 5 Test Cases Passed | 40 %